REMARKS

Claims 17-32 are pending, with claims 17, 29, and 30 being in independent form. Applicants have renumbered the claims 16-31, added by Second Preliminary Amendment, as claims 17-32 as required in the Action. No marked up copy of the claims is being provided since no substantive amendments have been made.

At the outset, Applicants acknowledge with appreciation the indication of allowable subject matter.

In the Office Action, Claims 17-21, 25, 26, and 30-32 stand rejected for anticipation by U.S. Patent No. 6,275,198 to Kenoun et al. (Kenoun). Applicants believe the pending claims to be novel and inventive for the following reasons.

Anticipation requires that every feature of the claimed invention be shown in a single prior document. In re Paulsen, 30 F.3d 1475 (Fed. Cir. 1994); In re Robertson, 169 F.3d 743 (Fed. Cir. 1999). The pending claims positively recite limitations that are not described in the cited document.

For example, claims 17 and 30 recite, among other things, an antenna including both a radiator and a feedback conductor having a first end, which is electrically connected to the second end of the radiator, the feedback conductor extending along the radiator in a first direction from the second end of the radiator towards the first end of the radiator, wherein the feedback conductor includes a second end, extending along the radiator in a second direction towards he second end of the radiator. The Action asserts that Kenoun describes such a feedback conductor as element 58 illustrated in FIG. 3, but this assertion is not supported by what is described in Kenoun.

Kenoun describes a wide band dual mode antenna (10) that includes an electrically conductive wire (50) having a total length associated with a first resonant frequency. The wire (50) has first and second ends (52, 54), and includes a plurality of intercoupled segments (56, 58, 62). Kenoun, Abstract. Kenoun further describes that the dimensions associated with the segments 56, 58, 62 can be varied to adjust the frequency response of the antenna 10 at two or more resonant frequencies. Id., col. 4, ll. 18-21. It is also described that the total length of the wire 50 and the

intercoupling of the segments 56, 58, 62 determines the modes of resonance and the bandwidth of the antenna 10 at the resonant frequencies. Id., at ll. 21-24. Accordingly, Kenoun describes an antenna having only a radiator, albeit a radiator having a number of segments capable of resonating at a number of frequencies and in a number of modes, but no feedback conductor is described as the Action asserts.

In contrast, the antenna defined in claims 17 and 30 includes both a resonator and a feedback conductor. Applicants describe that the miniaturization of the resonator and the substantially different design of the resonator and feedback conductor ensures the coupling between the resonator and feedback conductor to be relatively low. See, e.g., Written Description, p. 6, ll. 2-12.

Applicants further describe that the claimed combination of the feedback conductor and a suitably dimensioned radiator makes it possible to reduce the input voltage and to increase the input current of the end-fed dipole, thereby obtaining an antenna input impedance that may be matched to a 50 ohm system. Moreover, the reduced input voltage requirements of the antenna consequently reduce any coupling to the apparatus housing or chassis of the communication apparatus to which the antenna may be attached. See, id., p. 8, l. 9 - p. 10, l. 12. As such, an improved antenna gain is made possible as illustrated in FIGS. 8-12 of the application.

While Applicants do describe embodiments capable of resonating at multiple frequencies, it is not the feedback conductor that realizes these additional resonant frequencies, but instead the properties are provided by, e.g., an endcoil 34 as shown in FIG. 3. Moreover, the resonator portion may be modified to exhibit broadband properties by including, e.g., the end portions 44, 54 shown in FIGS. 4 and 5. Each of the elements 34, 44, 54 providing discrete multi-band or broadband radiating properties are separate and distinct from the claimed feedback conductor.

It should be clear from the above that the intercoupled segments 56, 58, 62 of Kenoun's antenna each operate as radiators and not as the claimed feedback conductor. Nevertheless, measurements of a prototype according to the Kenoun

antenna have been made that show that the U-shaped part of the antenna (56, 58, 64) exhibits a dual resonance at about 100 MHZ and 2200 MHZ. Accordingly, neither portion 56 or 58 operates as the claimed feedback conductor. Moreover, when including the helix-shaped part 62 in the measurements, the resonance properties of the antenna were slightly broadened and situated at about 900 MHZ and 1800 MHZ. Consequently, the helix portion of the antenna 10 cannot be considered a feedback conductor either, as it appears to operate as an extension of the segments 56 and 58 of the antenna, i.e., as a feed-forward element rather than as a feedback conductor.

Accordingly, the claimed feedback conductor is not described in the cited document, and claims 17 and 30 should be allowable for at least this reason. The remaining dependent claims define other novel features not described in Kenoun, but are considered allowable for at least the same reasons as their respective base claim.

For the foregoing reasons, Applicants believe the application to be in condition for allowance, and respectfully request notice thereof at an early date. The Examiner is encouraged to telephone the undersigned at the below-listed number if, in the Examiner's opinion, such a call would aid in the examination of this application.

Respectfully submitted,

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